

## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO. FILING DATE FIRST NAMED INVENTOR ATTORNEY DOCKET NO. CONFIRMATION NO. 180577-00630WS 9805 07/08/2003 10/616,036 Akhlaq Moman EXAMINER 31013 7590 .09/01/2005 PASTERCZYK, JAMES W KRAMER LEVIN NAFTALIS & FRANKEL LLP INTELLECTUAL PROPERTY DEPARTMENT ART UNIT PAPER NUMBER 1177 AVENUE OF THE AMERICAS NEW YORK, NY 10036 1755

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/616,036	MOMAN ET AL.
	Examiner	Art Unit
	J. Pasterczyk	1755
The MAILING DATE of this communication a		ith the correspondence address
A SHORTENED STATUTORY PERIOD FOR REF WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory perion  - Failure to reply within the set or extended period for reply will, by stat Any reply received by the Office later than three months after the ma earned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNI 1.136(a). In no event, however, may a od will apply and will expire SIX (6) MOI ute, cause the application to become A	CATION. reply be timely filed  NTHS from the mailing date of this communication. BANDONED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed on 23	June 2005.	
	nis action is non-final.	
3) Since this application is in condition for allow	vance except for formal mat	ters, prosecution as to the merits is
closed in accordance with the practice unde	r <i>Ex parte Quayle</i> , 1935 C.[	D. 11, 453 O.G. 213.
Disposition of Claims		
4) ☐ Claim(s) 1,4,5,7,8,10,11,14-19,21-28 and 30 4a) Of the above claim(s) 27,28 and 30 is/arc 5) ☐ Claim(s) is/are allowed.  6) ☐ Claim(s) 1,4,5,7,8,10,11,14-19 and 21-26 is/7) ☐ Claim(s) is/are objected to.  8) ☐ Claim(s) 1,4,5,7,8,10,11,14-19,21-28 and 30 10 10 10 10 10 10 10 10 10 10 10 10 10	e withdrawn from considerar	tion.
pplication Papers		
9) The specification is objected to by the Exami 10) The drawing(s) filed on is/are: a) a Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the	ccepted or b) objected to ne drawing(s) be held in abeya ection is required if the drawing	nce. See 37 CFR 1.85(a). g(s) is objected to. See 37 CFR 1.121(d).
riority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a li	ints have been received. Ints have been received in Aministry documents have been eau (PCT Rule 17.2(a)).	Application No  received in this National Stage
ttachment(s)  ☑ Notice of References Cited (PTO-892) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/0	Paper No(	Summary (PTO-413) s)/Mail Date nformal Patent Application (PTO-152)

Art Unit: 1755

1. This Office action is in response to the amendment filed 6/23/05 and refers to the Office action of 1/18/05.

- 2. The prior art rejections of the previous Office action are withdrawn due to amendment. However, c.f. below for new formal and prior art rejections made necessary by amendment.
- 3. In updating the search for this case, the examiner found numerous references by the named inventors of the present application. Applicants are reminded of their duty to disclose under 37 CFR 1.56.
- 4. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because: it still lacks the signature of the inventor Khalid Al-Bahily. It appears as if inventor Moman signed for Al-Bahily with no reason given.

5. Claims 1, 4, 5, 7, 8, 10, 11, 14-19 and 21-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, 1. 2, insert --each of a-- after "at least one" to make clear that all three transition metal species are present in the present catalyst composition. In 1. 3 change "M<sub>4</sub>" to --MX<sub>4</sub>--. In 1. 4 before "at" at the end of the line insert --and-- for the reason given above. In 1. 7, in order for the compound to be a titanate, n cannot equal zero. Insert a comma after "magnesium compound" in 1. 8.

Art Unit: 1755

In claim 5 begin l. 4 with --an-- simply for grammatical reasons. In claim 14, l. 4, insert a comma after "atom" for the same reason.

In claim 15, correct the spelling in l. 4 of the second compound.

In claim 17, l. 2, insert --organic-- before "polymeric" for clarity.

In claim 23, correct the spelling of the last compound.

- 6. The examiner informally notes that the formula given for an alumoxane in claim 24 limits the alumoxane to a single aluminum atom, while it is known that in solution alumoxanes are a complex equilibrium mixture of linear, cyclic, and even cage polymeric structures.
- 7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 8. Claims 1, 4, 5, 7, 8, 10, 11, 14-19 and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shipley, USP 4,496,661 (hereafter referred to as Shipley) in view of Mink et al., USP 6,417,130 (hereafter referred to as Mink) (note filing date) and Hamed et al., USP 6,403,520 (hereafter referred to as Hamed).

Shipley discloses numerous limitations of the invention as claimed (abstract; col. 2, 1. 17-55; col. 3, 1. 23-60; col. 4, 1. 49-51).

Shipley lacks disclosure of combining a metallocene catalyst with the other catalysts as well as use of an organic support.

However, Mink teaches that combination of Ziegler-Natta catalyst components with metallocenes is conventional in the art (abstract; col. 2, l. 46-61; col. 3, l. 34-42; col. 4, l. 55-67;

Art Unit: 1755

col. 5, l. 7-60; col. 6, l. 27-39, l. 60-66). In addition, Hamed teaches that in catalysts having multiple transition metal components it is conventional to use a polymeric organic support (abstract; col. 3, l. 61 to col. 4, l. 18).

It would have been obvious to one of ordinary skill in the art to apply the teachings of Hamed and Mink to the disclosure of Shipley with a reasonable expectation of obtaining a highly-useful olefin polymerization catalyst with the expected benefit of the catalyst providing a polymer with a broad or bimolecular molecular weight distribution.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

Application/Control Number: 10/616,036

Art Unit: 1755

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

J. Pasterczyk

AU 1755

8/29/05

SUPERVISORY PATENT EXAMINER

Page 5